be implemented by any known means, either in hardware and/or software, respectively, if it is only adapted to perform the described functions of the respective parts. The mentioned method steps can be realized in individual functional blocks or by individual devices, or one or more of the method steps can be realized in a single functional block or by a single device.

[0162] Generally, any method step is suitable to be implemented as software or by hardware without changing the idea of the present invention. Devices and means can be implemented as individual devices, but this does not exclude that they are implemented in a distributed fashion throughout the system, as long as the functionality of the device is preserved. Such and similar principles are to be considered as known to a skilled person.

[0163] Software in the sense of the present description comprises software code as such comprising code means or portions or a computer program or a computer program product for performing the respective functions, as well as software (or a computer program or a computer program product) embodied on a tangible medium such as a computer-readable (storage) medium having stored thereon a respective data structure or code means/portions or embodied in a signal or in a chip, potentially during processing thereof.

[0164] The present invention also covers any conceivable combination of method steps and operations described above, and any conceivable combination of nodes, apparatuses, modules or elements described above, as long as the above-described concepts of methodology and structural arrangement are applicable.

[0165] In view of the above, there are provided measures for network interface utilization dependent charging determination. Such measures exemplarily comprise establishing a connection between a network and a neighboring network for transiting a transmission session, obtaining connection state parameters based on at least one of said connection, said network, and said neighboring network, and generating a charging information message based on said connection state parameters at a network interface side, and receiving a charging information message related to a connection between a network and a neighboring network for transiting a transmission session, storing connection state parameters based on said charging information message, and generating an account for said transmission session based on said connection state parameters at a charging evaluation side.

[0166] Even though the invention is described above with reference to the examples according to the accompanying drawings, it is to be understood that the invention is not restricted thereto. Rather, it is apparent to those skilled in the art that the present invention can be modified in many ways without departing from the scope of the inventive idea as disclosed herein.

LIST OF ACRONYMS AND ABBREVIATIONS

[0167] 3GPP Third Generation Partnership Project
[0168] ACR Accounting Request
[0169] ASN.1 Abstract Syntax Notation One
[0170] AVP Attribute Value Pair (attributes in Diameter)
[0171] BS Billing System
[0172] CDR Charging Data Record
[0173] CSCF Call Session Control Function
[0174] HPLMN Home Public Land Mobile Network
[0175] IBCF Interconnect Border Control Function
[0176] ICID IMS Charging IDentifier

[0177] IMS IP Multimedia Subsystem
[0178] IOI Inter Operator Identifier
[0179] IP Internet Protocol
[0180] NNI Network to Network Interface
[0181] OCFS OFfline Charging System
[0182] P-CSCF Proxy CSCF
[0183] S-CSCF Serving CSCF
[0184] SIP Session Initiation Protocol
[0185] TRF Transit and Routing Function
[0186] TS Technical Specification
[0187] UE User Equipment
[0188] VPLMN Visited Public Land Mobile Network

1. A method, comprising:
establishing a connection between a network and a neighboring network for transiting a transmission session,
obtaining connection state parameters based on at least one of said connection, said network, and said neighboring network, and
generating a charging information message based on said connection state parameters.

2. The method according to claim 1, wherein
said connection state parameters comprise at least one of a roaming indication parameter indicative of usage of roaming for said connection between said network and said neighboring network, a connection direction parameter indicative of connection direction with respect to said network, a trust parameter indicative of a trust state between said network and said neighboring network, and an address parameter indicative of said neighboring network.

3. The method according to claim 2, wherein
said obtaining comprises at least one of:
setting said roaming indication parameter to non-roaming, if roaming is not used for said connection between said network and said neighboring network, setting said roaming indication parameter to roaming, if roaming is used for said connection between said network and said neighboring network, and setting said roaming indication parameter to roaming loopback, if roaming is used for said connection between said network and said neighboring network and if said connection is returned to or from said neighboring network, and
setting said connection direction parameter to inbound, if said connection is incoming with respect to said network, and setting said connection direction parameter to outbound, if said connection is outgoing with respect to said network, and
setting said trust parameter to trusted, if said connection to said neighboring network is trustable, and setting said trust parameter to untrusted, if said connection to said neighboring network is not trustable, and
setting said address parameter to an IP address of said connected neighboring network.

4. The method according to claim 1, wherein
said generating comprises aggregating at least said connection state parameters to said charging information message.

5. The method according to claim 1, wherein
said establishing is performed between said network and two neighboring networks for transiting said transmission session from one of said two neighboring networks to the other of said two neighboring networks,
said obtaining is performed with respect to any of said two neighboring networks, and